## ABSTRACT OF THE DISCLOSURE

The present invention discloses microfluidic modules for making nanocrystalline materials in a continuous flow process. The microfluidic modules include one or more flow path with mixing structures and one or more controlled heat exchangers to process the nanocrystalline materials and reagents in the flow path. The microfluidic modules can be interconnected to form microfluidic reactors that incorporate one or more process functions such as nucleation, growth, and purification.